Date.	Mean Time. (Launceston.)	Diff. R.A. Comet from Star.	Diff. Decl.	Name of Star.	Hour Angle. (Approx.)
1884.	h m	m s	′ ″		h m
Apr. 3	8 48 45	− 0 4	−11 36″	989 Lacaille	6 38
	8 57 45	− 0 3·3	−10 1	„	6 47
4	8 50 20	+ 3 33	+10 15	„	6 29
	8 59 20	+ 3 45·5	+10 34	„	6 48

Comet "Ross."

Feb. 1	9 15 0	+ 0 14·7	+19 43	9623 Lacaille	6 14
	9 25 0	+ 0 17	+18 24	„	6 24

A very hazy object; nebulous; measures very difficult; no definite point. The only opportunity afforded for obtaining measures.

In all the above measures, different refraction and the comet's proper motion are not reckoned for.

Launceston, Tasmania : 1884.

Ephemeris for Finding the Positions of the Satellites of Uranus, 1885. By A. Marth.

The angle of position P of the minor axes, the major and minor semi-axes a and b of the apparent ellipses described by the satellites, the longitudes $u—U$ of the satellites reckoned in their orbits from the points which are in superior conjunction with the planet's centre and the planeto-centric latitude of the Earth above the assumed plane of the orbits, are approximately the following :

		Ariel.				*Umbriel.*			
Greenw. noon 1885.	P.	a_1	b_1	u_1-U	Diff.	a_2	b_2	u_2-U	Diff.
Jan. 13	285·45	14·75	+4·29	114·70	1428·46	20·54	+5·97	134·01	868·75
23	·46	14·87	4·30	103·16	·44	20·72	5·99	282·76	·72
Feb. 2	·47	14·99	4·28	91·60	·41	20·89	5·97	71·48	·70
12	·48	15·09	4·24	80·01	·38	21·03	5·91	220·18	·69
22	·50	15·18	4·18	68·39	·35	21·14	5·83	8·87	·66
Mar. 4	·51	15·24	4·10	56·74	·33	21·23	5·71	157·53	·65
14	·53	15·27	4·00	45·07	·30	21·27	5·58	306·18	·63
24	285·54	15·28	+3·89	33·37	·27	21·28	+5·43	94·81	·61
Apr. 3	·55	15·26	3·78	21·64	·26	21·26	5·27	243·42	·61
13	·56	15·21	3·67	9·90	·24	21·19	5·11	32·03	·60
23	·57	15·14	3·56	358·14	·23	21·10	4·96	180·63	·60
May 3	·57	15·05	3·46	346·37	·23	20·97	4·82	329·23	·60
13	·57	14·95	3·37	334·60	·22	20·82	4·70	117·83	·60
23	·58	14·83	3·31	322·82	1428·22	20·66	4·61	266·43	868·61
June 2	285·57	14·70	+3·26	311·04		20·48	+4·54	55·04	

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Titania.   Oberon.

1885	Lat.of Earth.	a_2	b_2	u_2-U	Diff.	a_4	b_4	u_4-U	Diff.
Jan. 13	+16·90	33·70	+9·79	207·38	413·53	45·06 +13·10		35·30	267·40
23	16·79	33·99	9·82	260·91	·51	45·45	13·13	302·70	·38
Feb. 2	16·60	34·26	9·79	314·42	·50	45·81	13·09	210·08	·37
12	16·33	34·49	9·70	7·92	·48	46·13	12·97	117·45	·36
22	16 00	34·68	9 56	61·40	·47	46·38	12·78	24·81	·34
Mar. 4	15·61	34·82	9·37	114 87	·46	46·56	12·53	292·15	·34
14	15·20	34·89	9·15	168·33	·45	46·66	12·23	199·49	·34
24	+14·77	34·91	8·90	221·78	·45	46·68	11·90	106·83	·33
Apr. 3	14·35	34·86	8·64	275·23	·45	46·62	11·55	14·16	·33
13	13·95	34·76	8·38	328 68	·44	46·48	11·20	281·49	·33
23	13·59	34·60	8·13	22·12	·45	46·27	10 87	188·82	·34
May 3	13·29	34·40	7·90	75·57	·46	46·00	10·57	96·16	·35
13	13·05	34·15	7·71	129·03	·46	45·67	10·31	3·51	·36
23	12·89	33·88	7·56	182·49	413·48	45·31	10·11	270·87	267·37
June 2	+12·82	33·59	+7·45	235·97		44·92 +9·97		178·24	

These values are to be interpolated for the times for which the positions of the satellites are required. The position-angles p and distances s are then to be found by means of the formulæ:

$$s \sin (p-P) = a \sin (u-U)$$
$$s \cos (p-P) = b \cos (u-U)$$

The satellites move in the direction of *increasing* position-angles, and will be at their greatest elongations ("N" in posit. $P+90°$ and "s" in posit. $P-90°$), and at their superior and inferior conjunctions with the centre of the planet about the following Greenwich mean times:

Ariel.

1885.	N. h	S. h		N. h	S. h		N. h	S. h
Jan. 12	19·9	14 2·1	Mar. 1	17·1	2 23·3	Apr. 18	14·4	19 20·7
15	8·3	16 14·6	4	5·6	5 11·8	21	2·9	22 9·2
17	20·8	19 3·1	6	18·1	8 0·3	23	15·4	24 21·7
20	9·3	21 15·5	9	6 6	10 12·8	26	3·9	27 10·2
22	21·8	24 4 0	11	19·1	13 1·3	28	16·4	29 22·7
25	10·3	26 16·5	14	7·5	15 13·8	May 1	4·9	2 11·2
27	22·8	29 5·0	16	20·0	18 2·3	3	17·4	4 23·7
30	11·2	31 17·5	19	8·5	20 14·8	6	5·9	7 12·2
Feb. 1	23·7	3 6·0	21	21·0	23 3·3	8	18·4	10 0·6
4	12·2	5 18·5	24	9·5	25 15·8	11	6·9	12 13·1
7	0·7	8 6·9	26	22 0	28 4·2	13	19·4	15 1·6
9	13·2	10 19·4	29	10·5	30 16·7	16	7·9	17 14·1

1885.	N. h		S. h		N. h		S. h		N. h		S. h
Feb. 12	1·7	13	7·9	Mar. 31	23·0	A. 2	5·2	May 18	20·4	20	2·6
14	14·2	15	20·4	Apr. 3	11·5	4	17·7	21	8·9	22	15·1
17	2·7	18	8·9	6	0·0	7	6·2	23	21·4	25	3·6
19	15·1	20	21·4	8	12·5	9	18·7	26	9·9	27	16·1
22	3·6	23	9·9	11	1·0	12	7·2	28	22·4	30	4·6
24	16·1	25	22·4	13	13·5	14	19·7	31	10·9	J. 1	17·1
27	4·6	28	10·8	16	2·0	17	8·2	June 2	23·4	4	5·6

Umbriel.

1885.	N. h		S. h		N. h		S. h		N. h		S. h
Jan. 12	11·8	14	13·6	Mar. 3	5·3	5	7·1	Apr. 21	23·0	24	0·7
16	15·3	18	17·0	7	8·8	9	10·5	26	2·4	28	4·2
20	18·7	22	20·5	11	12·3	13	14·0	30	5·9	M. 2	7·6
24	22·2	26	23·9	15	15·7	17	17·5	May 4	9·4	6	11·0
29	1·7	31	3·4	19	19·2	21	20·9	8	12·8	10	14·6
Feb. 2	5·1	4	6·8	23	22·7	26	0·4	12	16·3	14	18·0
6	8·6	8	10·2	28	2·1	30	3·9	16	19·8	18	21·5
10	12·0	12	13·8	Apr. 1	5·6	3	7·3	20	23·2	23	1·0
14	15·5	16	17·2	5	9·1	7	10·8	25	2·7	27	4·5
18	19·0	20	20·7	9	12·5	11	14·3	29	6·2	31	7·9
22	22·4	25	0·1	13	16·0	15	17·7	June 2	9·7	4	11·4
27	1·9	M. 1	3·6	17	19·5	19	21·2	6	13·1	8	14·9

Titania.

Super. Conj. h		N. Elong. h		Infer. Conj. h		S. Elong. h
		Jan. 10	3·8	Jan. 12	8·1	Jan. 14 12·3
Jan. 16	16·6	18	20·8	21	1·0	23 5·3
25	9·5	27	13·7	29	18·0	31 22·2
Feb. 3	2·5	Feb. 5	6·7	Feb. 7	10·9	Feb. 9 15·2
11	19·4	13	23·6	16	3·9	18 8·1
20	12·4	22	16·6	24	20·8	27 1·1
Mar. 1	5·3	Mar. 3	9·6	Mar. 5	13·8	Mar. 7 18·0
9	22·3	12	2·5	14	6·8	16 11·0
18	15·3	20	19·4	22	23·7	25 4·0
27	8·2	29	12·5	31	16·7	Apr. 2 21·0
Apr. 5	1·2	Apr. 7	5·4	Apr. 9	9·7	11 13·9
13	18·2	15	22·4	18	2·7	20 6·9
22	11·2	24	15·4	26	19·6	28 23·9
May 1	4·1	May 3	8·4	May 5	12·6	May 7 16·9
9	21·1	12	1·3	14	5·6	16 9·8
18	14·1	20	18·3	22	22·6	25 2·8
27	7·0	29	11·3	31	15·5	June 2 19·8

Oberon.

Super. Conj.		N. Elong.		Infer. Conj.		S. Elong.	
	h		h		h		h
Jan. 11	16·3	Jan. 15	1·1	Jan. 18	9·9	Jan. 21	18·6
25	3·4	28	12·2	31	21·0	Feb. 4	5·8
Feb. 7	14·6	Feb. 10	23·4	Feb. 14	8·1	17	16·9
21	1·7	24	10·5	27	19·3	Mar. 3	4·1
Mar. 6	12·9	Mar. 9	21·7	Mar. 13	6·5	16	15·3
20	0·1	23	8·9	26	17·7	30	2·5
Apr. 2	11·3	Apr. 5	20·1	Apr. 9	4·9	Apr. 12	13·7
15	22·5	19	7·3	22	16·1	26	0·9
29	9·7	May 2	18·5	May 6	3·3	May 9	12·0
May 12	20·8	16	5·6	19	14·4	22	23·2
26	8·0	29	16·8	June 2	1·6	June 5	9·8